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## METHODS AND APPARATUS FOR SECURITY OVER FIBRE CHANNEL

## **Abstract of the Disclosure**

Methods and apparatus are provided for improving both node-based and message-based security in a fibre channel network. Entity to entity authentication and key exchange services can be included in existing initialization messages used for introducing fibre channel network entities into a fibre channel fabric, or with specific messages exchanged over an already initialized communication channel. Both permessage authentication and encryption mechanisms can be activated using the authentication and key exchange services. Messages passed between fibre channel network entities can be encrypted and authenticated using information provided during the authentication sequence. Security services such as per-message authentication, confidentiality, integrity protection, and anti-replay protection can be implemented.